

THE INVENTION CLAIMED IS:

1. An apparatus comprising:

5 a spray bar having an alignment mark and one or more openings, the spray bar configured to output a fluid spray from the one or more openings;

a mounting device having an alignment mark, the mounting device configured to support the spray bar; and a substrate support configured to support a

10 substrate;

wherein the alignment mark of the spray bar and the alignment mark of the mounting device may be aligned so as to position a fluid spray output by the spray bar toward a substrate supported by the substrate support.

15 2. The apparatus of claim 1 wherein the one or more openings comprise one or more nozzles.

20 3. The apparatus of claim 1 further comprising a scrubber brush configured to contact a surface of a substrate supported by the substrate support.

25 4. The apparatus of claim 1 wherein the alignment mark of the spray bar and the alignment mark of the mounting device comprise a pair of holes.

30 5. The apparatus of claim 1 wherein at least one of the alignment mark of the spray bar and the alignment mark of the mounting device comprises a notch.

6. The apparatus of claim 1 wherein the spray bar comprises a plurality of alignment marks.

7. The apparatus of claim 1 wherein the mounting device comprises a plurality of alignment marks.

8. A method comprising:

5 providing a spray bar having an alignment mark, the spray bar adapted to output a fluid spray;

providing a mounting device having an alignment mark, the mounting device adapted to support the spray bar; and

10 aligning the alignment mark of the spray bar and the alignment mark of the mounting device so as to position a fluid spray output by the spray bar toward a substrate supported by the substrate support.

15 9. A scrubber device comprising:

a spray bar having an alignment mark, the spray bar configured to output a fluid spray;

20 a mounting device having an alignment mark, the mounting device configured to support the spray bar;

a substrate support configured to support a substrate; and

25 at least one scrubber brush configured to contact a surface of a substrate supported by the substrate support;

wherein the alignment mark of the spray bar and the alignment mark of the mounting device may be aligned so as to position a fluid spray output by the spray bar toward the at least one scrubber brush.

30 10. The scrubber device of claim 9 wherein the one or more openings comprise one or more nozzles.

11. The scrubber device of claim 9 wherein the alignment mark of the spray bar and the alignment mark of the mounting device comprise a pair of holes.

5 12. The scrubber device of claim 9 wherein at least one of the alignment mark of the spray bar and the alignment mark of the mounting device comprises a notch.

10 13. The scrubber device of claim 9 wherein the spray bar comprises a plurality of alignment marks.

14. The scrubber device of claim 9 wherein the mounting device comprises a plurality of alignment marks.

15 15. A method comprising:
providing a spray bar having an alignment mark, the spray bar adapted to output a fluid spray;
providing a mounting device having an alignment mark, the mounting device adapted to support the spray bar;
providing at least one scrubber brush adapted to contact a surface of a substrate supported by the substrate support; and
aligning the alignment mark of the spray bar
20 and the alignment mark of the mounting device so as to position a fluid spray output by the spray bar toward the at least one scrubber brush.

25 16. An apparatus configured to rinse and dry a substrate, comprising:
a tank of cleaning fluid configured to at least partially submerge a substrate;

a lifting mechanism configured to lift a substrate from the cleaning fluid; and

5 a drying vapor source positioned to supply drying vapors to an air/substrate/cleaning fluid interface formed when the lifting mechanism lifts a substrate from the cleaning fluid, the drying vapor source comprising:

a spray bar having an alignment mark and one or more openings, the spray bar configured to output a drying vapor from the one or more openings; and

10 a mounting device having an alignment mark, the mounting device configured to support the spray bar;

15 wherein the alignment mark of the spray bar and the alignment mark of the mounting device may be aligned so as to position a drying vapor output by the spray bar toward the air/substrate/cleaning fluid interface.

20 17. The apparatus of claim 16 wherein the one or more openings comprise one or more nozzles.

25 18. The apparatus of claim 16 wherein the alignment mark of the spray bar and the alignment mark of the mounting device comprise a pair of holes.

19. The apparatus of claim 16 wherein at least one of the alignment mark of the spray bar and the alignment mark of the mounting device comprises a notch.

30 20. The apparatus of claim 16 wherein the spray bar comprises a plurality of alignment marks.

21. The apparatus of claim 16 wherein the mounting device comprises a plurality of alignment marks.

22. A method for cleaning, rinsing and drying a substrate comprising:

5 at least partially submerging a substrate in a tank of cleaning fluid;

lifting the substrate from the cleaning fluid;

10 providing a spray bar having an alignment mark, the spray bar adapted to output a drying vapor;

15 providing a mounting device having an alignment mark, the mounting device adapted to support the spray bar; and

20 aligning the alignment mark of the spray bar and the alignment mark of the mounting device so as to position a drying vapor output by the spray bar toward an air/substrate/cleaning fluid interface formed when the first substrate is lifted from the cleaning fluid.

23. An apparatus configured to rinse and dry a substrate, comprising:

25 a tank of cleaning fluid configured to at least partially submerge a substrate;

a lifting mechanism configured to lift a substrate from the cleaning fluid;

30 a rinsing fluid source positioned to supply rinsing fluid to a surface of a substrate as the lifting mechanism lifts the substrate from the cleaning fluid, wherein the rinsing fluid contacts the substrate thereby forming an air/substrate/rinsing fluid interface; and

a drying vapor source positioned to supply drying vapors to the air/substrate/rinsing fluid interface, the drying vapor source comprising:

a spray bar having an alignment mark and one or more openings, the spray bar configured to output a drying vapor from the one or more openings; and

5 a mounting device having an alignment mark, the mounting device adapted to support the spray bar; wherein the alignment mark of the spray bar and the alignment mark of the mounting device may be aligned so as to position a drying vapor output by the spray bar toward the air/substrate/rinsing fluid interface.

10 24. The apparatus of claim 23 wherein the one or more openings comprise one or more nozzles.

15 25. The apparatus of claim 23 wherein the alignment mark of the spray bar and the alignment mark of the mounting device comprise a pair of holes.

20 26. The apparatus of claim 24 wherein at least one of the alignment mark of the spray bar and the alignment mark of the mounting device comprises a notch.

25 27. The apparatus of claim 24 wherein the spray bar comprises a plurality of alignment marks.

28. The apparatus of claim 24 wherein the mounting device comprises a plurality of alignment marks.

29. A method for cleaning, rinsing and drying a substrate comprising:

30 at least partially submerging a substrate in a tank of cleaning fluid;

lifting the substrate from the cleaning fluid;

spraying rinsing fluid onto the surface of the substrate as the substrate is lifted, thereby forming an air/substrate/rinsing fluid interface;

providing a spray bar having an alignment

5 mark, the spray bar adapted to output a drying vapor;

providing a mounting device having an alignment mark, the mounting device adapted to support the spray bar; and

aligning the alignment mark of the spray bar

10 and the alignment mark of the mounting device so as to position a drying vapor output by the spray bar toward the air/substrate/rinsing fluid interface.

30. An apparatus configured to rinse and dry a substrate, comprising:

a tank of cleaning fluid configured to at least partially submerge a substrate;

a lifting mechanism coupled to the tank and configured to lift a substrate from the cleaning fluid;

20 a rinsing fluid source positioned to supply rinsing fluid to a surface of a substrate as the lifting mechanism lifts the substrate from the cleaning fluid, wherein the rinsing fluid contacts the substrate thereby forming an air/substrate/rinsing fluid interface, wherein
25 the rinsing fluid source comprises:

a spray bar having an alignment mark and one or more openings, the spray bar configured to output rinsing fluid from the one or more openings; and

30 a mounting device having an alignment mark, the mounting device configured to support the spray bar;

wherein the alignment mark of the spray bar and the alignment mark of the mounting device may be

aligned so as to position rinsing fluid output by the spray bar toward an air/substrate interface thereby forming the air/substrate/rinsing fluid interface; and

5 a drying vapor source positioned to supply a drying vapor to the air/substrate/rinsing fluid interface.

31. A method for cleaning, rinsing and drying a substrate comprising:

at least partially submerging a substrate in a tank of cleaning fluid;

lifting the substrate from the cleaning fluid;

providing a spray bar having an alignment mark, the spray bar adapted to output rinsing fluid;

15 providing a mounting device having an alignment mark, the mounting device adapted to support the spray bar;

20 aligning the alignment mark of the spray bar and the alignment mark of the mounting device so as to position rinsing fluid output by the spray bar toward the substrate thereby forming an air/substrate/rinsing fluid interface; and

supplying a drying vapor to the air/substrate/rinsing fluid interface.